

Remarks

I. Status of the Application and Claims

As originally filed, the present application had only 1 claim. This was cancelled in a Preliminary Amendment and new claims 2-5 were added. In the present response, new claims 6-8 have been added. Thus, upon entry of the present amendments, the claims pending in the application will be claims 2-8.

II. Amendments

Support for new claims 6-8 may be found on page 1 of the application, line 6-page 2, line 19. Applicants submit that these amendments do not add new matter to the application and respectfully request that they be entered.

The Rejections

I. Rejection of Claims Under 35 USC §112, Second Paragraph

On page 2 of the Office Action, the Examiner rejects claim 1 as failing to meet the requirements of 35 USC §112, second paragraph, based upon the allegation that the term “shadography” is indefinite.

Claim 1 was cancelled in a Preliminary Amendment filed on September 13, 2005, and Applicants therefore assume that the Examiner is referring to claim 2 in this rejection. In response, Applicants have deleted the term “shadography” from the claim and respectfully submit that the Examiner’s rejection has thereby been obviated.

II. Rejection of Claims Under 35 USC §102 or §103

On pages 2-4 of the Office Action, all pending claims are rejected under 35 USC §102 or, in the alternative, under 35 USC §103 based upon Toki, *et al.* (US 4,681,615). The Examiner alleges that Toki discloses heating dried gel in a controlled atmosphere containing traces of water. Although the properties of the silica glass required in Applicants’ claims are not disclosed in Toki, the Examiner argues that these properties would be inherently present since the process used by Toki is substantially the same as the process used by Applicants.

Applicants respectfully traverse this rejection.

Applicants have reviewed the Toki reference and cannot see any basis for the allegation that the sintering step described therein is carried out in a controlled atmosphere containing water. A “controlled atmosphere” is, by definition, one in which the levels of different components are maintained at defined amounts. There is no indication in Toki that heating was performed under such conditions. The Examples section mentions using a lid with a defined aperture during the low temperature drying of gels but not during sintering. There is also no suggestion that any undesirable effects result from the use of an open atmosphere or that any benefit might be gained by controlling the amount of water present. Therefore, Applicants cannot see any basis for the Examiner’s allegation that this element of Applicants’ claims is present in, or obvious from, Toki.

Applicants also do not agree with the allegation that the various properties of silica glass required in Applicants’ claims are inherently disclosed by Toki. In this regard, it should be noted that Toki’s process is actually not substantially the same as the process used by Applicants. In particular, Toki includes a step in which fumed silica is added after the hydrolysis of metal alkoxides and before gel formation by polycondensation (see *e.g.*, col. 2, lines 39-42). The reference clearly indicates that this addition changes the properties of the gel formed, apparently by altering porosity (see col. 2, line 60-col. 3, line 36). In light of this, Applicants submit that there is no basis for the Examiner’s allegation that the properties required of the silica glass of Applicants’ claims are inherently present in the product described in Toki. Processes that are substantially different would not be expected to produce essentially identical products. It should also be noted that certain claims now pending even exclude the possibility of adding fused silica in the manner suggested by Toki. In this regard, the Examiner’s attention is specifically directed to claims 6-8.

Conclusion

In light of the discussion above, Applicants respectfully submit that all of the Examiner’s rejections have been overcome. It is therefore requested that these rejections be withdrawn and that the claims presently pending in the application be allowed.

If, in the opinion of the Examiner, a phone call may help to expedite the prosecution of this application, the Examiner is invited to call Applicants' undersigned attorney at (240)683-6165.

Respectfully submitted,

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